

What is claimed is:

1. A transport stream recording apparatus comprising:
an input unit operable to input a transport packet constituting said transport stream;
a generator operable to generate program sequence information indicative of an interval
in which a program attribute in said transport stream does not change; and
a recording unit operable to record said program sequence information along with said
transport stream.
2. A transport stream recording apparatus according to claim 1, wherein said
generator generates program sequence information indicative of the sequence of transport
packets that includes no PCR_PID discontinuity.
3. A transport stream recording apparatus according to claim 1, wherein said
generator generates program sequence information indicative of the sequence of transport
packets that includes no change of the number of video and/or audio elementary streams.
4. A transport stream recording apparatus according to claim 1, wherein said
generator generates program sequence information indicative of the sequence of transport
packets that includes no discontinuity of packet identifier of each video and/or audio stream.
5. A transport stream recording apparatus according to claim 1, wherein said
generator generates program sequence information indicative of the sequence of transport
packets that includes no change of the coding attribute of each video and/or audio stream.

6. A transport stream recording apparatus according to claim 5, wherein said coding attribute includes video frame frequency.

7. A transport stream recording apparatus according to claim 5, wherein said coding attribute includes aspect ratio.

8. A transport stream recording apparatus according to claim 5, wherein said coding attribute includes audio coding method.

9. A transport stream recording apparatus according to claim 5, wherein said coding attribute includes audio component type.

10. A transport stream recording apparatus according to claim 5, wherein said coding attribute includes sampling frequency.

11. A transport stream recording method, comprising the steps of:
receiving a transport packet constituting said transport stream;
generating program sequence information indicative of an interval in which a program attribute in said transport stream does not change; and
recording said program sequence information along with said transport stream.

12. A transport stream reproducing apparatus for reproducing a transport stream recorded on a recording medium, comprising:
a reproducing unit operable to reproduce said transport stream and program sequence information from said recording medium, said transport stream including a sequence of

transport packets, said program sequence information indicating the sequence of transport packets that includes no program attribute discontinuity;

a processor operable to generate output signal to be presented; and

a controller operable to control the processor on the basis of the program sequence information.

13. A transport stream reproducing method for reproducing a transport stream recorded on a recording medium, comprising the steps of:

reproducing said transport stream and program sequence information from said recording medium, said transport stream including a sequence of transport packets, said indicating the sequence of transport packets that includes no program attribute discontinuity;

generating output signal to be presented; and

controlling the generating step on the basis of the program sequence information.

14. A storage medium having a computer program code mechanism embedded in the computer storage medium for performing a method for recording a transport stream, the computer program code mechanism performing the steps of:

receiving a transport packet, said transport stream including said transport packet;

generating program sequence information indicative of an interval in which a program attribute in said transport stream does not change; and

recording said program sequence information along with said transport stream.

15. A storage medium having a computer program code mechanism embedded in the computer storage medium for performing a method for reproducing a transport stream recorded on a recording medium, the computer program code mechanism

performing the steps of:

reproducing said transport stream and program sequence information from said recording medium, said transport stream including a sequence of transport packets, said indicating the sequence of transport packets that includes no program attribute discontinuity; generating output signal to be presented; and controlling the generating step on the basis of the program sequence information.

16. A storage medium storing program sequence information for use in an apparatus for reproducing a transport stream recorded on a recording medium, said apparatus comprising a reproducing unit configured to reproduce said transport stream and program sequence information, said transport stream including a sequence of transport packets, a processor configured to generate output signal to be presented, and a controller configured to control the processor based on the program sequence information, said program sequence information comprising:

information indicating the sequence of transport packets that includes no program attribute discontinuity.